DOCUMENT RESUME

ED 407 200 RC 021 027

AUTHOR Johnson, Virginia Anne; Parkerson, Sandra
TITLE Practical Measures for Assessing Work Performance Behaviors in Individuals with Severe Disabilities.
INSTITUTION Arkansas Univ., Hot Springs. Arkansas Research & Training Center in Vocational Rehabilitation.
PUB DATE [Mar 97]
NOTE 30p.; Shorter version was presented at the Annual Meeting of the American Council on Rural Special Education (San Antonio, TX, March 1997); for proceedings, see RC 020 986.
PUB TYPE Guides - Non-Classroom (055) -- Reports - Descriptive (141) -- Tests/Questionnaires (160)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Employment Potential; *Job Performance; Observation; *Severe Disabilities; Test Manuals; *Vocational Evaluation; Vocational Rehabilitation; Work Sample Tests
IDENTIFIERS Behavioral Assessment; *Work Performance Assessment (Test); *Work Personality Profile

ABSTRACT

This paper describes the Work Performance Assessment (WPA) and the Work Personality Profile (WPP) and provides instructions for their use. The WPA and WPP evaluate behaviors associated with job retention and advancement among disabled workers. Together the two evaluation components form a comprehensive observational assessment designed to provide a useful alternative when traditional multiweek vocational evaluation is inappropriate or impractical. WPA is a simulation procedure that assesses behavioral responses to 19 common work demands. Assessment activities include two work tasks, a teamwork activity, and a socializing opportunity. WPP is a 58-item work personality rating instrument that can be used wherever work-related behavior is occurring. WPP assesses attitudes, values, habits and behaviors essential to retaining a job and acquiring promotability potential, and presents results on a profile form that includes 11 primary and 5 secondary work behavior categories. Sections on the WPA and the WPP discuss features of each measure, target behaviors, creating or selecting the test environment, test materials, orientation and training for test administrators, videotaping the WPA, briefing and debriefing participants, and rating and reporting performance. Included are a sample WPA report form, the WPP, software instructions, and a sample WPP report with rating scales and explanation of employability deficits. Contains 30 references. (SV)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 407 200

Practical Measures for Assessing Work Performance Behaviors in Individuals with Severe Disabilities

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

Dr. Virginia Anne Johnson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Arkansas Research & Training Center
In Vocational Rehabilitation

105 Reserve Avenue Hot Springs, Arkansas

RC 024 021

BEST COPY AVAILABLE

Practical Measures for Assessing Work Performance Behaviors in Individuals With Severe Disabilities

Virginia Anne Johnson

&

Sandra Parkerson

RC 021027

Table of Contents

Page

Overview iii

Introduction 1

Work Performance Assessment (WPA)

- Features of the Measure 3
- Targeted Behaviors 4
- Creating the Test Environment 5
- Test Materials 5
- Orienting and Training the Test Administrator 6
- Videotaping the Assessment 7
- Briefing and Debriefing 8
- Rating and Reporting Performance 9
- Forms for the WPA 10

Work Personality Profile (WPP)

- Features of the Measure 12
- Targeted Behaviors 12
- Selecting a Test Environment 13
- Test Materials 13
- Orienting Test Administrator 14
- Rating Performance 14
- Preparing Reports 15
- Forms for the Work Personality Profile 17

References 23

OVERVIEW

Success in employment is a process that begins with the first day of work as the individual adjusts to the work situation and demonstrates value to the organization. Retaining a job and acquiring promotability potential involve (1) doing more than is expected and (2) being effective in interpersonal relations (Crites, 1982; Wilms, 1984; Herr, 1984; Neff, 1986; Roessler & Bolton, 1983). Employment success is a direct result of individual worker attributes and level of motivation (Crites, 1976,1982; Johnson, 1994; McClelland, 1961; Underwood, 1966).

As summarized by Johnson (1994, p. 342), research has identified worker attributes required across all types of work environments in four sequential and cumulative categories, like steps on a staircase to employment success, beginning with task performance and followed in ascending order by teamwork, supervision and socializing (Oetting & Miller, 1977; Roessler & Bolton, 1983). This means a worker needs first to demonstrate skills to respond to basic production expectations, followed by capabilities to work cooperatively with others, appropriately respond to supervision, and relate interpersonally to coworkers and supervisors. An employee who demonstrates attributes from an initial step (i.e., produces an appropriate quantity and quality of finished work), but functions less effectively on a later step (i.e., social interaction with coworkers and supervisors), is likely to experience job retention but not advancement. Likewise, workers who exhibit effective social skills or respond well to supervision but are unable to meet basic productivity standards or work cooperatively may also experience limited employment success. Success involves performance of the attributes in each category in a sequential and cumulative demonstration of effectiveness.

For workers who are disabled, knowledge of employer expectations regarding these worker attributes promotes a focus on developing and demonstrating an appropriate level of performance across task performance, teamwork, supervision, and socializing. This information will enable workers who are disabled to understand that work performance that is the same as coworkers who are not disabled will likely result in job retention while performance that is better than coworkers demonstrates promotability potential.

The need to assess these worker attributes and provide training for persons who are disabled was identified in research conducted at the University of Arkansas Research and Training Center in Vocational Rehabilitation. The Work Performance Assessment (**WPA**) and Work Personality Profile (**WPP**) were developed to meet the following needs:

1. targeting skill training needs,
2. determining job coaching needs,
3. assisting in social skills training,
4. focusing supervisory and observation activities, and
5. providing accurate case file documentation.

INTRODUCTION

The Work Performance Assessment (WPA) and the **Work Personality Profile (WPP)** are evaluation components that can be used in conjunction with **Vocational Coping Training (VCT)** to create an assessment and training curriculum designed to target behaviors associated with job retention and advancement.

Together WPA and WPP form a comprehensive observational assessment designed to provide a useful and efficient alternative for individuals whose level of functioning, vocationally immaturity and lack of work experience make traditional multi-week vocational evaluation inappropriate and impractical. The two components are a cost effective alternative to elaborate mock-work environments such as sub-contract job stations that involve significant investments of time, effort and money. The WPA and WPP provide job coaches, work adjustment trainers, placement specialists and supervisors in the work place with information that can be used to successfully initiate and maintain competitive or supported employment. It also provides referral sources/requesting personnel with documentation of the need for resources to underwrite services (e.g., training, job coaching, supported employment, long-term follow-up).

Comprehensive observational assessment is a common type of prevocational assessment used with persons who are disabled in both rehabilitation facilities and school programs. It can be more effective for persons who are disabled than psychometrics normed on groups of non-disabled individuals. While work samples are better for measuring skills and aptitudes, comprehensive observational assessment is ideal for assessing work performance behaviors and work personality attributes. In fact, it is "...impossible to know the *work personality* unless one observes the individual functioning in an actual work situation or environment" (Barton, 1967). This type of assessment model has the following benefits:

1. Provides the opportunity to observe and evaluate in a natural setting or natural task where typical performance is more likely to be manifested than in a testing situation;

2. Conveys realism that can't be duplicated in other assessment techniques in relation to environmental or situational factors;

3. Minimizes anxiety produced by formal testing;

4. Allows evaluation in different situations (natural or manipulated) and variation of common work conditions without too much emphasis on efficient production;

5. Produces results that are more curriculum referenced, leading to better instructional planning;

6. Provides a more realistic view of performance (does he or she? rather than can he or she?);

7. Offers unique opportunity for training an individual at the time assessment occurs and within a real-life context;

8. Does not require a lot of equipment, materials or special physical space;

9. Allows assessment of many more work behaviors that standardized vocational testing or work sample approaches;

10. Provides relevant information for rehabilitation planning with severely disabled individuals.

In keeping with the comprehensive observational assessment model, the WPA and WPP do not provide a simple division between "those who can make it" and "those who can't" on the continuum of employment success. WPA and WPP rating scales identify where individuals fall on the continuum and provides detailed information for training needs and placement decisions.

It is well established that reliability and validity for this type of assessment depend on two primary factors: (1) the quality of the rating scale used, and (2) training of test administrators to promote standardization of the stimulus conditions for eliciting the behaviors. Therefore, the design for WPA and WPP involved the following steps to standardize procedures:

1. Identifying specific skills or aspects of behavior
2. Defining the behaviors and levels of skill
3. Making the observation of each behavior quantifiable
4. Training for assessors making the observations

Although the limitations of rating scales and raters are ever present, comprehensive observational assessment can be highly effective when other types of vocational tests are inappropriate. The two assessment components described below offer a unique means of observing and assessing a person who is disabled in actual or near-actual work situations.

1. The Work Performance Assessment (WPA)

WPA is a simulation procedure designed to assess behavioral responses to nineteen common work demands. Assessment activities involve two work tasks, a teamwork activity and a socializing opportunity requiring about one hour to administer by a professional who assumes the role of a work supervisor. The simulation takes place in a quiet room using inexpensive, easily obtained materials. Groups of two can be rated in vivo and larger groups of four to six can be videotaped and scored later. The easy to use rating form and score sheet create a record of assets and limitations in specific behavioral terms. A total score representing an overall level of job retention and advancement skill is generated by calculating the proportion of behavioral criteria in responding to the nineteen work demands.

Research indicates the WPA items are consistent in the level of demand they present to test participants and can be scored reliably. The most reliable estimate of performance can be derived from multiple ratings (i.e., in vivo rating by the evaluator averaged with ratings by a trained rater from a videotape). A Demonstration Video for WPA Administrators is designed to increase reliability by enabling administrators to standardize their presentation of the nineteen work demands. The manual contains instructions on how to create the simulation, scoring directions, and master copies to reproduce the rating form and scoring sheet.

2. The Work Personality Profile (WPP)

WPP is a work personality rating instrument that can be used wherever work related behavior is occurring (rehabilitation facilities and employment settings). WPP assesses those attributes that satisfy fundamental work role requirements (i.e., attitudes, values, habits, and behaviors essential to retaining a job and acquiring promotability potential. Benefits of this measuré include its comprehensive coverage, behavioral orientation, diagnostic function and direct rating format. After observing a test participant in a work or work-like setting (i.e, following administration of the WPA), the 58 items can be rated in 5-10 minutes using a four-point scale. Results are reported on a profile form that includes 11 primary and 5 secondary work behavior categories. The manual contains administration instructions and master copies of the instrument, tally sheet and profile report form.

Utilization of the WPA and WPP

Following administration of the WPA, test administrators may also want to complete the WPP. Although the WPP does not provide as much behavioral specificity as the WPA rating form, it corroborates WPA

ratings. The WPA provides more behavioral specificity but the WPP lends itself to frequent administration to document progress before employment, after placement during the sixty day follow up period, or every three months of ongoing supported employment. WPP's level of detail is sufficient to report progress or plan training to address deficiencies. WPA and WPP form a comprehensive observational assessment procedure across employment and pre-employment settings (e.g., high schools, colleges, vocational training and independent living programs, or job club programs). Use both the WPA and WPP (in that order), since most test participants will proceed to real work environments. When only the WPP is to be used, it must be possible to observe test participants engaged in work-like or work activities. Although each component is self-standing and can be used as a separate assessment activity, using both components provides comprehensive information.

Development of the WPA and WPP

WPA and WPP items were pilot-tested, analyzed, adapted, and field-tested for appropriateness and accuracy with individuals who are disabled. The assessment manual, scoring software and demonstration video contain all materials needed to conduct each measure.

Curriculum Implementation

The WPA and WPP form a comprehensive assessment component to use in conjunction with the training component Vocational Coping Training. Together these assessment and training components form a complete curriculum. When used in conjunction with a training program, they help to determine if trainees acquired, maintained, and generalized work behaviors and attributes from the training environment to work situations. The first and last VCT training sessions can involve each trainee in pre-and post-test WPA assessments. The WPA scoring system makes it possible to tailor instruction for individuals and to group individuals with similar training needs because it identifies specific assets and limitations in work performance behaviors and work personality attributes.

For some groups of trainees, it may be useful to identify the average pre- and post-training performance. Instead of a single pre-test and post-test, three baseline assessments may need to be conducted on three separate occasions: before, at the midpoint, and after training. Post-session assessments can also be scheduled following each training module to provide data regarding the effects of each training module. The trainer should rate each post-session assessment immediately after training before planning subsequent activities. Gradual improvement in quality and quantity of behaviors should be apparent across the modules. Review sessions may be needed if behavior levels are not keeping pace with module content.

THE WORK PERFORMANCE ASSESSMENT

FEATURES OF THE MEASURE

The Work Performance Assessment is a brief, cost effective work simulation that is administered in a private space where no interruptions will occur by a test administrator trained in the use of WPA procedures. WPA can be used during the evaluation phase of a rehabilitation client's/student's program or across all phases of client/student programs:

1. In conjunction with the WPP as a baseline for comparison to identify behavioral change.

2. At the beginning, mid-point and completion of work adjustment training to document progress, justify funding, and identify assets to use in resumes or during placement activities.

3. Following competitive employment to document performance at three weeks, three months and six months before case closure.

4. Following supported employment to guide job coaching activities and document the on-going need for funding of these services.

Introduced in the context of sorting common food items, nineteen work performance demands are introduced by a test administrator role-playing a work supervisor. To increase the probability of a standardized delivery, the WPA administration instructions contain precise details for presenting each of the nineteen demands. The script contains the following material for each of the nineteen work demands:

1. Identification of the work demand

2. Specific instructions required to deliver the demand

   A. Demeanor of the "work supervisor"
   B. Dialogue validated for the specific task
   C. Special instructions and/or materials
   D. Behavioral criteria to be rated

To preserve reliability of the measure, standardization of these activities is the responsibility of the test administrator. The administrator may change the mode of presenting instructions to accommodate test participants (e.g. learning disabled, blind, deaf). However. they must precisely and accurately convey each item according to instructions in the manual. The Demonstration Video for WPA Administrators shows how to present work demands in a standardized manner.

WPA was designed to test two participants simultaneously. In programs where groups of clients/students are admitted regularly, it may be most efficient to conduct group WPA administrations (four to six participants). In order to administer the WPA to a single individual participant, a staff member will need to role-play the coworker.

Although similar to a traditional work sample in appearance (sorting food service items), the WPA does not evaluate specific vocational skills. It assesses the quality and quantity of critical work performance behaviors identified in the next section.

OVERVIEW OF TARGET BEHAVIORS

WPA activities are designed to assess work performance across the following seven categories:

1.	Preparation:	Starting the work day
2.	Initiation:	Starting work tasks
3.	Persistence:	Staying on task
4.	Feedback:	Handling compliments and criticisms
5.	Changing:	Switching to new activities
6.	Cooperation:	Dividing parts of a task
7.	Communication:	Socializing appropriately

Within these categories, the following nineteen work demands are presented by a trained test administrator who role-plays a work supervisor:

1. Greet each test participant
2. Direct participants to work stations and explain nature of work
3. Provide vague instructions
4. Explain supervisory error
5. Provide detailed instructions
6. Observe participants working
7. Stand next to each participant

8. Create a distraction
9. Show a new way to work
10. Introduce time pressure
11. Criticize participant's work
12. Compliment participant's work
13. Ask participants to switch tasks
14. Ask participants to socialize
15. Direct participants to work together
16. Ask participants to criticize each other
17. Ask participants to compliment each other
18. Observe participants completing task together
19. Socialize with each participant

Across the 19 work demands, precisely defined items measure performance of 83 behaviors required to enact the work demand. Examination of items in the WPA test booklet reveals the precision with which these behaviors are defined. WPA activities are designed to stimulate performance of each behaviors. An item tally is the first step in contrasting the number of behaviors an individual actually performs to the total of 83 items. Computation of the fraction and percentage identify the proportion of behaviors that are present. This global measure of work performance can be diagnosed by examining which of the 83 behaviors were absent. These items become behavioral objectives to address in training.

CREATING THE TEST ENVIRONMENT

WPA should be conducted in a work-like setting where no interruptions or distractions will occur. The room should not be one in which the test participants have previously had interactions. The test environment will need three separate areas: an entry/role-taking area, a work area, and a break area as depicted in the diagram. Each area should meet the following requirements:

Entry/Role-Taking Area:

1. Seating for participants waiting to take the test
2. Visual separation from the room where testing takes place
3. Sufficient space for the test administrator to address participants briefly prior to entering the testing room.

Work Area:

1. Table with space for up to six work stations
2. Straight backed chairs for each work station
3. Test administrator's desk and chair facing work station table
4. Table for test materials

Break Area:

1. Opportunities to sit together or separately
2. Several small tables and chairs

TEST MATERIALS

Materials For Creating a Work Situation

WPA work tasks involve sorting common food service items to elicit the critical behaviors associated with work performance. A variety of tasks and materials were field tested for sorting. Sorting tasks require the moderate level of activity and attention needed to reveal critical behaviors and can be enacted by most individuals. Common food service items were found to be effective for the following reasons:

1. Food service items are familiar and strongly associated with real work for most test participants;
2. The items are inexpensive or donated upon request;
3. They are available in most communities;
4. They are easily replaceable;
5. They present little opportunity for injury.

A suggested quantity and type of food service items needed to administer the WPA to two test participants is listed below. A large number of materials is needed to facilitate the two types of work tasks designed to minimize the possibilities of test participants receiving cues from each other and to provide an opportunity for the test administrator to request that each trainee change jobs. Individual test participants also work at different speeds so an ample supply of materials is advised.

- 100 packets of salt
- 100 packets of pepper
- 100 straws
- 50 wooden & 50 plastic coffee stirrers
- 200 toothpicks
- 100 each of small, medium, and large cup lids
- 6 cafeteria trays
- 3 large plastic bags & 4 large boxes

Local availability of food service items may necessitate substitutions for items listed above. Some suggested replacements are wet napkins, coffee creamer packets, plastic knives, forks, spoons, french fry sacks or boxes, pie sleeves, artificial sweetner packets, and small paper or plastic plates.

Materials For Rating Test Performance

The test administrator will need the following materials for each WPA session:

Administration instructions
Clock or watch with minute hand
Camera and tripod
Blank videotapes
Per participant, one rating form

ORIENTATION AND TRAINING FOR TEST ADMINISTRATORS

The WPA is presented as a real work situation in which test participants are to respond as if the test administrator were a real work supervisor. Using the WPA Administration Manual, the administrator follows a detailed script designed to present stimuli which will elicit the critical work performance behaviors in a reliable and valid manner. Only limited variation is permissible in the administration of assessment stimuli if reliability is to be preserved. As long as the test administrator's procedures do not vary significantly and their approach is standardized, valuable and useful information will be obtained.

Assessment activities should be coordinated by a rehabilitation professional with sign language skills and experience working with small groups of persons who are disabled. Orientation and training of test administrators should involve the following:

1. Becoming thoroughly familiar with all procedures

   A. Read the WPA Administration Instructions
   B. Watch the Demonstration Video for WPA Administrators

2. Role-play the entire process until the routine proceeds smoothly

   A. Set up the testing room
   B. Organize test materials
   C. Set up video camera
   D Coordinate with staff providing briefing
   E. Present introduction to participants
   F. Administer each of the 19 work demands
   G. Complete rating forms in-vivo and from videotape
   H. Dismiss participants
   I Coordinate with staff providing debriefing
   J. Tally ratings, identify fraction of behaviors present
   K. Compute the percent of behaviors present

During orientation and training, administrators learn that WPA should not be a punitive experience for test participants; if possible, it should be a positive one. Some individuals may have been at the facility only briefly. For some, this may be their first experience being videotaped. In addition, there is likely to be a wide variation in prior work history. Some may have extensive work experience, but some may never have worked.

Test administrators learn to adopt a pleasant but neutral demeanor (e.g., eye contact, positive words) that is appropriate for a work supervisor. Should a participant be extremely anxious, the test administrator will apply good judgment to achieve a balance between being realistically supervisory in demeanor and increasing the participant's anxiety beyond tolerance. There may also be some uncertainty about the role-play situation. For example, a participant may interject, "How long do I have to do this?". The administrator's answer should guide the participant back into the worker role (i.e., "Try to work as quickly as you can. Try to be neat and accurate"). A participant may ask "Am I supposed to pretend I've had a job before?" The administrator should pause long enough to respond with, "No, pretend you are a worker now" -- then go right on. A pleasant non-supervisory manner should be adopted outside the testing room after the WPA is completed.

VIDEOTAPING THE ASSESSMENT

Use a video camera to record groups of more than two test participants or in situations when more detailed information is needed (e.g., participants with minimal language competency, multiple disabilities, or who function at a lower level). Research indicates that this method of scoring is acceptable. Job coaches and work adjustment trainers can increase the efficiency of their services by viewing the results of the WPA. Individualized instruction is facilitated and on-the-job failures can be avoided. It is also important to emphasize that reliability of test scores can be increased by having both the test administrator and a trained rater score performance from the videotape.

In some agencies it may be necessary to obtain written consent before videotaping assessment activities. If this is necessary, the briefing session should include introduction of a consent and release form. Show participants the form so they can read it along with you. Introduce its content this way:

> "We videotape the tests. First, to help you work better on your actual job; and second, to help us improve our training program here. I need you to sign a permission form to show that we have your permission to look at the tape. Your tape will be kept confidential."

Print participant names on the form and then ask them to sign the form in the following way:

> "Let me show you what this says. You, ___(Name)___, give permission to the ___(that's us)___ to videotape you and to use these recordings. You understand that the tapes will be used by ___(us)___ only for assessment purposes. Do you

have any questions or any problems with that? If you understand it and agree, then you need to sign it here."

If a participant does not date the form, do that when you sign "witness". If a participant refuses to sign the consent form, politely ask why. If you cannot easily convince him/her after explaining it again, arrange for the individual to be tested without videotaping and scored in-vivo.

BRIEF AND DEBRIEF PARTICIPANTS

Before engaging in comprehensive observational assessment, the individual must be prepared. Commonly, persons who are disabled have had past experiences where they tested poorly. In contrast to psychometric or work sample approaches, the situational assessment environment places the individual so near the real world of work and the performance criteria to be predicted that failure can be much more threatening. Before testing clients/students need information about how assessment results will be used as well as the relationship between the assessment and their ability to retain a job and acquire promotability potential.

Reliability of test results will be increased by explaining procedures used in the assessment:

1. A "pretend" work setting with work-like tasks
2. A test administrator role-playing a work supervisor
3. Other test participants performing as coworkers.

Participants can also be informed on how to prepare mentally and physically for testing:

1. Get a good night's sleep
2. Eat a good meal
3. Think and act like a real worker.

Hesitancy and resistance can also be reduced by communicating:

1. The starting time
2. How long the assessment usually takes (1 hour)
3. The site (room or building) where test will be given.

The purpose of identifying assets that can be used to reach satisfying, work-related goals should be conveyed. If it is the policy of the agency to carefully explain test results to the participant, then the time, place, and professional implementing this activity should be identified at this time.

The test administrator must role-play a work supervisor in a highly realistic work simulation, therefore, it compromises their credibility to step out of role and provide briefing for test participants. Ideally, a staff member, not otherwise involved in the assessment, will conduct individual or small group briefing sessions to prepare participants for comprehensive observational assessment. To preserve integrity of the situational assessment, the test administrator initiates activities just outside the testing room with only a brief reference or reminder regarding to the "pretend" work activity and the role-playing involved.

Debriefing, following the assessment may be equally important. The reality of the situational assessment in combination with vocational inexperience or low functioning level may require the following debriefing activities for participants.

1. "OK, your test is finished. I have a few questions to ask you. Do you remember how you felt and what you were thinking about before you went in?"

2. "How do you feel now?"

3. "How do you think you did?"

4. "You understand that was not a real job, right? It was just an example." If the participant thought this was a real job, clarify that it was "pretend."

This information will be used on the WPA Report Form to indicate attitudes regarding participation and any "critical incidents" that may have occurred during testing. Reliability and validity of the assessment will be increased by (1) eliminating misunderstanding about participation in assessment activities, and (2) identifying misunderstanding should it occur so it can be considered during interpretation of test results.

RATING AND REPORTING PERFORMANCE

Using the WPA test booklet, a total of 83 items are assessed across the nineteen demands. The presence of the targeted behavior in each item is indicated with a check mark. For behaviors that are not present, the item is left blank. A tally of present behaviors is divided by 83 to determine the percent. The tally, the fraction, and the percent are written on the front of the test booklet.

Your agency may want to design a WPA report form to convey WPA percentile scores and other assessment information from the test booklet needed by the referral source/requesting personnel for accurate interpretation of test results. Such a report form might contain a brief overview of WPA for referral sources/requesting personnel who are unfamiliar with the measures it contains. The format should be designed to explain the meaning of the scores. It could also provide a format for the test administrator to rate a participant's overall performance as good, fair, or poor and to indicate if they would retain, promote, or terminate the test participant. Additionally, the administrator could record the following information about each participant:

1. General attitude toward participation in test activities;

2. Any critical incidents occurring during the test that should be considered in service provision;

3. An overall assessment of participant skills in relation to the type of work they probably will be performing;

4. Recommendations for appropriate service options.

Behavioral descriptions in these sections should avoid such terms as "motivated worker" or "lazy trainee." More useful statements include "stays on task", "acknowledges own mistakes," "gestures angrily at co-workers," or "begins work without understanding the task."

A WPA report form could facilitate concrete decision making as well as the matching of resources available in a service program. A sample report form is contained in Figure 1. It can be used as documentation by referral sources/requesting personnel of the need for services such as work adjustment training or job coaching. The test booklets and/or videotape will alert work adjustment trainers or job coaches to potential performance deficiencies thus saving time and preventing on-the-job problems.

Figure 1

Sample WPA Report Form

Participant's Name	Assessment#
Rater's Name	Date

Behavioral Categories

1. Preparation: Starting the work day
2. Initiation: Starting work tasks
3. Persistence: Staying on task
4. Feedback: Handling compliments and criticisms
5. Changing: Switching to new activities
6. Cooperation: Dividing parts of a task
7. Communication: Socializing appropriately

Behavioral Category	Number in Category	Number Present	Percent
1	7		
2	13		
3	15		
4	17		
5	5		
6	12		
7	14		
8	**83**		

1. **Assessor's overall rating of performance**

☐ Good ☐ Fair ☐ Poor

2. **If this person were my employee I would:**

☐ promote them
☐ retain them
☐ terminate them

3. **The participant's general attitude toward participation in assessment activities:**

4. **"Critical" incidents that occurred during the assessment which should be considered in the planning of services.**

5. **An overall assessment of the participant's relation to the type of work that person is or will probably be engaged in.**

6. **Service(s) the test administrator believes would be most appropriate for this participant.**

☐ Limited one-to-one instruction/coaching on specific skills
☐ Individualized skills training
☐ Group skills training
☐ Other (specify):

THE WORK PERSONALITY PROFILE

FEATURES OF THE MEASURE

WPP is a checklist for rating behaviors in comprehensive observational assessment settings. It uses existing work or work-like settings to produce criterion-referenced scores that can be useful in determining (1) the need for training in behaviors associated with job retention and advancement, (2) progress during training, and (3) application of the behaviors after training. This work personality rating instrument can be used wherever work related behavior is occurring (rehabilitation facilities and employment settings).

Work personality attributes include attitudes, values, habits and behaviors that satisfy fundamental work role requirements and are essential to retaining a job and acquiring promotability potential. The concept emerged in the early work of Gellman (1953) and was later expanded by Roessler and Bolton (1983). In an effort to develop a measure that could comprehensively assess the work personality, behaviors included in ten well-known work assessment measures were sorted to rationally identify 16 behavioral clusters or categories. Field-testing resulted in 58 behavioral items across 11 dimensions of the work personality. To further identify psychometric dimensions of work behavior contained in the WPP, authors Bolton and Roessler (1986) factor analyzed the 58 items for a sample of 243 subjects. The resulting measure contained 11 rationally derived primary categories and five factor analyzed secondary categories across 58 items that could be rated in five to ten minutes. This highly efficient approach proved to be resistant to participant test anxiety, social desirability, and/or frustration with the measurement task.

The measure is efficient and psychometrically sound. Internal consistency reliabilities for the 16 categories were in the .80s and low .90s, re-rater reliabilities were in the .70s, .80s, and .90s indicating test administrators used the measure consistently from day to day and week to week. Inter-rater reliabilities were in the .40s, .50s, and .60s. Such levels are not unique in situational assessment. They indicate that independent ratings from two or more raters should be averaged and the composite scores used for diagnostic and planning purposes (Roessler & Bolton, 1986). Interestingly, across the measure only four categories, all involving communication and interaction with supervisors and coworkers, were found to be more subject to individual rater's interpretation.

The WPP has concurrent validity with widely used aptitude, interest, and personality measures identified substantial relationships between the behavioral categories and cognitive ability. Concurrent correlation was identified between eight of the categories and nine of the aptitudes measured by the General Aptitude Test Battery (GATB). Moderate relationships were found with twelve interest areas measured by the United State Employment Service Interest Inventory (USES-II). Virtual independence was found with the sixteen personality traits measured by the Sixteen Personality Factor Questionnaire. In addition, the measure was found to be predictive of general competence during vocational training and completion of vocational training. In fact, four of the eight categories were statistically significant predictors of general vocational competence.

TARGETED BEHAVIORS

The WPP identifies functioning levels in the following primary categories and secondary categories:

<u>Primary Categories</u>

1. Acceptance of the Work Role
2. Ability to Profit From Instruction or Correction
3. Work Persistence
4. Work Tolerance
5. Amount of Supervision Required
6. Extent Participant Seeks Assistance From Supervisor
7. Degree of Comfort or Anxiety With Supervisor
8. Appropriateness of Personal Relations With Supervisor
9. Teamwork

10. Ability to Socialize With Coworkers
11. Social Communication Skills

Secondary Categories

1. Task Orientation
2. Social Skills
3. Work Motivation
4. Work Conformance
5. Personal Presentation

A detailed description of each category is available as part of the WPP Profile Report Form found in the WPP manual.

SELECTING A TEST ENVIRONMENT

The WPP can be used wherever work related behavior is occurring (secondary and postsecondary educational facilities, rehabilitation facilities and employment settings). The 58-item rating form can be completed in 5-10 minutes after observing a participant in a work or work-like setting. Although the WPP can be used in a diagnostic capacity, its major benefit is in monitoring performance at repeated junctures in a variety of settings. The following settings can be used as WPP test environments:

1. During the evaluation phase of rehabilitation or educational programs with results utilized across all phases of programming.

2. Used in conjunction with the WPA as a baseline for comparison to identify behavioral change.

3. At the beginning, mid-point and end of work adjustment training to document acquisition of knowledge and behavior and to use with employers during placement.

4. Following competitive employment to document performance at three weeks, three months and six months.

5. Prior to supported employment to justify services.

6. Prior to supported employment to alert job coaches to assets and limitations that can impact work performance and attitudes of the supervisor and other company personnel.

7. Following supported employment to document the on-going need for funding of these services.

TEST MATERIALS

The WPP is administered in existing work settings so no materials are needed to create a simulated environment. The WPP only involves materials associated with rating activities:

Administration instructions
1 WPP Rating Form per participant
WPP software and software instructions
WPP Tally Sheet
WPP Profile Form

ORIENTING THE TEST ADMINISTRATOR

The WPP is administered in work or work-like settings where participants can be observed continuously for a period long enough to identify the presence and quality of the target behaviors. Ratings can be completed by work supervisors, work adjustment trainers, educators, job coaches, rehabilitation professionals and others who have an extended opportunity to observe participants engaged in work activities.

The WPP uses existing work settings and does not require administrators to contrive a test environment. Therefore, orientation and training involves developing around familiarity with the rating instrument, tally sheet and profile report. This measure lends itself to a division of labor between raters who complete the 58-item form and support staff who complete the WPP Tally Sheet, operate WPP software, record scores on the Profile Form, and convey data to the referral source/requesting personnel. Therefore, the following training activities may need to be targeted toward personnel responsible for these two types of responsibilities:

1. Become thoroughly familiar with the WPP Rating Form

   A. Review each of the 58 items
   B. Memorize the four-point rating scale

2. Practice observing and rating individuals who are disabled in work or work-like settings (i.e., in-vivo or videotaped WPA administration).

3. Transfer ratings to the WPP Tally Sheet

4. Use WPP software to compute percentages across primary and secondary categories.

5. Practice transferring percentages and completing the graph on the Profile Form.

Employers, job coaches and others who will be completing ratings but not processing the data will benefit from an orientation to other steps in the process but not need training or practice in completing those steps. The process will be facilitated, however, if employers, job coaches, and others completing ratings are aware of what happens to the ratings before they receive a completed WPP Profile. In like manner, personnel responsible for processing ratings collected by others will benefit from an orientation to rater's responsibilities. They will not need training or practice in watching for targeted behaviors to appear and assessing the quality of the behavior.

RATING PERFORMANCE

Using the WPP Rating Form (see Figure 2), a total of 58 items across the sixteen categories are rated as either (1) a problem area that will definitely limit the participant's chances for employment, or (2) performance inconsistent, a potential employability problem, (3) adequate performance, not a particular strength, or (4) a definite strength, an employability asset, or (x) no opportunity to observe the behavior. Copies of the rating form can be photocopied as needed or ordered from the ARTCVR Media Center.

Scoring by Computer

WPP ratings can be quickly and accurately scored on an IBM compatible computer. The software is designed to tally scores, calculate the average raw scale score for each behavioral category and print a profile report. A complete set of instructions (see Figure 3) comes with the WPP software for installation and for generating a printout of WPP scores. A sample printout is contained in Figure 4. Technical assistance is always available from ARTCVR if needed.

Scoring by Hand

Should an IBM compatible computer not be available, the WPP Tally Sheet provides a hand-scoring format for calculating the average raw scale score for each behavioral category. Ratings for the items in each category are summed and divided by the number of items in the category minus the number of items rated "0." The resulting score, ranging from 1.00 to 4.00, is the average for that category.

Because the categories are scored by summing raw item scores and then dividing by the number of items, the scores are moderately intercorrelated. The range for the eleven primary categories is .31 to .84 with a median of .62. For the five secondary categories the range is .38 to .69 with a median of .56. The secondary categories share common variance of 25 to 35% but are sufficiently independent to give information about five clearly separate aspects of the work personality.

PREPARING REPORTS

The WPP Profile Report Form was designed to convey behavioral category scores and other assessment information needed by the referral source/requesting personnel for accurate interpretation of test results. The left side of the report form contains a definitive list of each behavioral category for referral sources/requesting personnel who may be unfamiliar with the items it measures. The right side is designed to summarize the criterion-referenced scores in each behavioral category. The total possible WPP score is contrasted to the test participant's total score and average score. The report also provides a summary of those items most frequently rated (1) a problem area that will definitely limit the participant's changes for employment, (2) performance inconsistent, a potential employability problem, (3) performance inconsistent, potentially an employability problem, and (4) a problem area that will definitely limit the person's chance for employment. The graphic display visually contrasts assets and limitations. Figure 5 contains a completed profile report.

The WPP Report Form facilitates concrete decision making as well as the matching of resources available in a service program can be used as documentation by referral sources/requesting personnel of the need for services such as work adjustment training or job coaching. The rating forms will alert work adjustment trainers or job coaches to potential performance deficiencies thus saving time and preventing on-the-job problems. The quick, comprehensive, easily scored features of this measure also make it useful for supervisors in the workplace.

ADAPTATION OF THE MEASURE

Comprehensive observational assessment depends on perceptions. These perceptions can be selective and sometimes fallible unless rigorous care is taken in the (1) the quality of the rating scale used, and (2) the training of test administrators to promote standardization of the stimuli conditions for eliciting the behaviors to be assessed. The Work Performance Assessment demonstrates acceptable scorer reliability. Two separate studies (Roessler, Hinman & Lewis, 1987) identified administrator effects and listed the following factors that needed to be addressed by further research:

1. Definition of the exact behavioral criteria involved
2. Uniform administration of test conditions, and
3. Careful training of test administrators

The most reliable scores were obtained by (1) averaging multiple ratings from multiple test administrations both in vivo and videotaped ratings, and (2) using experienced vocational rehabilitation counselors as raters. The two research studies found that when multiple raters were utilized, the measure had the potential to identify individuals needing specific work adjustment services. In addition, inter-rater reliability ranged from .74 to .81 when the experienced vocational rehabilitation counselors assessed participant performance.

The testing environment where comprehensive situational assessment is typically performed does not often involve experienced test administrators and may not include multiple raters. The primary issue to address is increasing reliability of the measure when rated by a single individual and/or a rater who is not necessarily an education or rehabilitation professional. A secondary issue is the need for qualitative ratings. The WPA only rates the presence or absence of critical work performance behaviors. The WPP rates the quality of performance.

Research has indicated that rater training for non-professionals involving a thirty minute orientation lecture and demonstration resulted in inter-rater reliability of .62. These results indicate that orientation to the target behaviors, test materials, test environment and the rating format can increase inter-rater reliability. Therefore, *The Demonstration Video for WPA Administrators* was developed to present this information in video format. This thirty minute video includes a demonstration of how to administer each test item. The video demonstrates how administrators can be consistent in the level of demand they present to participants thus insuring reliability. It also demonstrates how the WPA inexpensively and efficiently offers a unique means of observing and assessing behaviors, habits, attitudes, and values in a work-like situation.

Figure 2

Work Personality Profile[1]

Please describe the client's observed work performance by using the five options listed below to complete the 58 behavioral items.

(4) A definite strength, an employability asset
(3) Adequate performance, not a particular strength
(2) Performance inconsistent, potentially an employability problem
(1) A problem area will definitely limit the person's chance for employment
(X) No opportunity to observe the behavior

Client	Last	First	Middle

Rater	Date

●	3	2	1	X	1. Sufficiently alert and aware
●	3	2	1	X	2. Learns new assignments quickly
●	3	2	1	X	3. Works steadily during entire work period.
4	3	●	1	X	4. Accepts changes in work assignments
4	●	2	1	X	5. Needs virtually no direct supervision
4	3	●	1	X	6. Requests help in an appropriate fashion
●	3	2	1	X	7. Approaches supervisory personnel with confidence
●	3	2	1	X	8. Is appropriately friendly with supervisor
4	●	2	1	X	9. Shows pride in group effort
●	3	2	1	X	10. Shows interest in what others are doing
4	3	2	●	X	11. Expresses likes and dislikes appropriately
4	●	2	1	X	12. Initiates work-related activities on time
4	3	●	1	X	13. Accepts work assignments and instructions from supervisor without arguing
4	●	2	1	X	14. Improves performance when shown how
4	3	●	1	X	15. Works at routine jobs without resistance
4	●	2	1	X	16. Expresses willingness to try new assignments
4	●	2	1	X	17. Carries out assigned tasks without prompting
4	3	2	●	X	18. Asks for further instructions if task is not clear
4	3	2	●	X	19. Accepts correction without becoming upset
4	●	2	1	X	20. Discusses personal problems with supervisor only if work-related.
4	3	●	1	X	21. Accepts assignment to group tasks
4	3	2	●	X	22. Seeks out co-workers to be friends
4	3	●	1	X	23. Responds when others initiate conversation

[1] Arkansas Research and Training Center in Vocational Rehabilitation, University of Arkansas, Fayetteville

BEST COPY AVAILABLE

4	●	2	1	X	**24.** Conforms to rules and regulations
●	3	2	1	X	**25.** Maintains satisfactory personal hygiene habits
4	3	●	1	X	**26.** Changes work methods when instructed to do so
4	●	2	1	X	**27.** Pays attention to details while working
4	●	2	1	X	**28.** Maintains productivity despite change in routine
4	●	2	1	X	**29.** Recognizes own mistakes
4	3	2	●	X	**30.** Asks for help when having difficulty with tasks
4	3	●	1	X	**31.** Comfortable with supervisor
4	●	2	1	X	**32.** Gets along with staff
4	3	●	1	X	**33.** Works comfortably in group tasks
4	3	●	1	X	**34.** Appears comfortable in social interactions
4	3	●	1	X	**35.** Initiates conversations with others
4	●	2	1	X	**36.** Displays good judgment in use of obscenities and vulgarities
●	3	2	1	X	**37.** Arrives appropriately dressed for work
4	3	●	1	X	**38.** Maintains improved work procedures after correction
4	3	2	●	X	**39.** Maintains work pace even if distractions occur
4	●	2	1	X	**40.** Performs satisfactorily in tasks that require variety and change
4	3	●	1	X	**41.** Initiates action to correct own mistakes
●	3	2	1	X	**42.** Performance remains stable in supervisor's presence
4	3	●	1	X	**43.** Supportive of others in group tasks
4	3	2	1	●	**44.** Joins social groups when they are available
4	●	2	1	X	**45.** Listens while other person speaks, avoids interrupting
●	3	2	1	X	**46.** Expresses pleasure in accomplishment
4	●	2	1	X	**47.** Listens to instructions or corrections attentively
4	3	●	1	X	**48.** Moves from job to job easily
4	●	2	1	X	**49.** Needs less than average amount of supervision
4	3	●	1	X	**50.** Offers assistance to co-workers when appropriate
4	3	●	1	X	**51.** Is sought out frequently by co-workers
4	3	●	1	X	**52.** Expresses positive feelings, e.g., praise, liking for others
4	3	2	1	●	**53.** Displays good judgment in playing practical jokes or "horsing around"
4	●	2	1	X	**54.** Transfers previously learned skills to new task
4	3	●	1	X	**55.** Handles problems with only occasional help
4	3	2	1	●	**56.** Assumes assigned role in group tasks
4	3	2	●	X	**57.** Expresses negative feelings appropriately, e.g., anger, fear, sadness
4	3	2	●	X	**58.** Controls temper

Figure 3

Instructions for Installing Report on all Systems

The WPP-SR Computer Report is a DOS program which can be run by DOS, Windows 3.0 or 3.1, and Windows95 systems. The WPP-SR can be installed by copying the WPPSR.EXE file on your diskette onto your hard drive using standard copying procedures for the system you are using. You may want to create a subdirectory/folder for the WPPSR on your hard drive and place the WPPSR.EXE file and the report files that you create into that subdirectory/folder. These instructions can be used with DOS, Windows and Windows95 operating systems.

1. Use standard procedures to reach the DOS C:> prompt.
2. Create a WPPSR subdirectory by typing at the C:> prompt:
   mkdir wppsr
3. Change directories so that you are in the WPPSR subdirectory by typing at the C:> prompt: cd wppsr
4. Install the WPPSR program by typing:
   copy a:\wppsr.exe c:\wppsr\wppsr.exe

To run the WPP-SR Computer Report:

1. Use standard procedures to reach the DOS C:> prompt.
2. Change to the WPPSR subdirectory by typing: cd wppsr
3. At the C:\wppsr> prompt type: wppsr

To print the WPP-SR reports you generate:

1. Use standard procedures to reach the DOS C:> prompt.
2. Change to the WPPSR subdirectory by typing: cd wppsr
3. At the c:\wppsr> prompt type: YOURFILENAME>PRN

Note: File names must be no more than 8 characters long with an optional 3-character extension following a period. DOS does not permit the use of some characters in a file name. We recommend using only letters and numbers in your file names. Do not use spaces within the file name. Some examples of correct DOS file names include: smith, joesmith, and joesmith.rep.

To look at a listing of the report files you have created:

1. Use standard operating procedures to reach the DOS C:> prompt.
2. Change to the WPPSR subdirectory by typing: cd wppsr
3. Type the command: dir

Figure 4

WORK PERSONALITY PROFILE

Client:
Rater:
Date:

PRIMARY SCALES	Percentile score 1--------25--------50--------75--------99	Raw Score
S1 Acceptance of work role	************************	3.30
S2 Ability to profit from instruction or correction	****	2.17
S3 Work persistence	******************	2.75
S4 Work tolerance	******	2.20
S5 Amount of supervision required	******	1.67
S6 Extent trainee seeks help from supervisor	**********************************	3.33
S7 Degree of comfort or anxiety with supervisor	************************************	3.50
S8 Appropriateness of relations with supervisor	**********************************	3.67
S9 Teamwork		NC
S10 Ability to socialize with co-workers	************************************	3.40
S11 Communication skills	********************************	3.00
SECONDARY SCALES	**1--------25--------50--------75--------99**	
F1 Task orientation	********	2.24
F2 Social skills	**********************************	3.30
F3 Work motivation		NC
F4 Work conformance	********************************	3.33
F5 Personal presentation	********************************	3.38

NC: Too many incomplete items

BEST COPY AVAILABLE

CRITICAL EMPLOYABILITY DEFICITS

Problems that Limit Chances for Employment (i.e., items rated '1')

(1) Not sufficiently alert
(2) Slow to learn new assignments
(5) Needs direct supervision
(29) Does not recognize own mistakes

Potential Employability Problems (i.e., items rated '2')

(4) Does not accept changes in work assignments
(12) Does not initiate work-related activities on time
(17) Does not carry out assigned tasks without prompting
(18) Does not ask for further instructions if task is not clear
(19) Becomes upset when corrected
(26) Resists changes in work methods
(27) Pays insufficient attention to details
(28) Does not maintain productivity after changes in routine
(38) Does not maintain improved work procedures after correction
(39) Does not maintain work pace if distractions occur
(40) Performance unsatisfactory in tasks requiring variety
(41) Does not initiate action to correct own mistakes
(48) Moves from job to job with difficulty
(49) Needs more than average amount of supervision
(54) Does not transfer previously learned skills to new task
(55) Requires frequent help with problems

Additional deficits may be determined from summary of ratings below

Ratings for the 58 behavioral items

(1)	1	(11)	3	(21)	0	(31)	4	(41)	2	(51)	3
(2)	1	(12)	2	(22)	4	(32)	4	(42)	4	(52)	3
(3)	4	(13)	4	(23)	3	(33)	0	(43)	0	(53)	4
(4)	2	(14)	3	(24)	3	(34)	3	(44)	3	(54)	2
(5)	1	(15)	3	(25)	3	(35)	3	(45)	3	(55)	2
(6)	4	(16)	3	(26)	2	(36)	4	(46)	4	(56)	0
(7)	4	(17)	2	(27)	2	(37)	4	(47)	3	(57)	3
(8)	3	(18)	2	(28)	2	(38)	2	(48)	2	(58)	4
(9)	0	(19)	2	(29)	1	(39)	2	(49)	2		
(10)	4	(20)	4	(30)	4	(40)	2	(50)	3		

The Work Personality Profile was developed by Brian Bolton and Richard Roessler. The WPP computer version was prepared by Paul M. Kuroda. The research was supported in part by research and training center grant G0083C0010104 from the National Institute for Handicapped Research to the Arkansas Research and Training Center in Vocational Rehabilitation, University of Arkansas, Fayetteville.

BEST COPY AVAILABLE

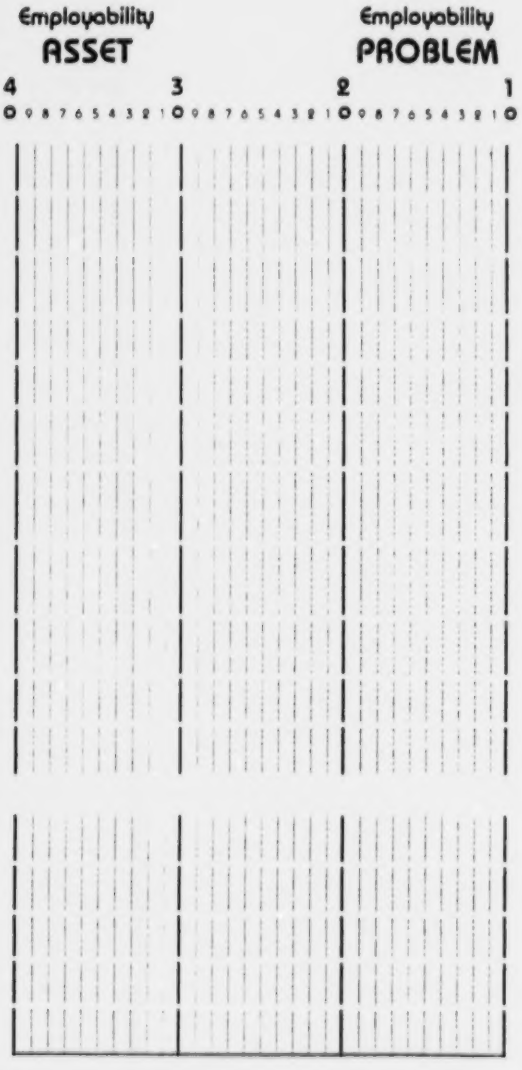
Figure 5

Work Personality Profile

REPORT[1]

Name	Sex	Age	Race

Education	Disability



Percentile Equivalent %

_____	S1	Acceptance of work role
_____	S2	Ability to profit from instruction or correction
_____	S3	Work persistence
_____	S4	Work tolerance
_____	S5	Amount of supervision required
_____	S6	Extent trainee seeks assistance from supervisor
_____	S7	Degree of comfort or anxiety with supervisor
_____	S8	Appropriateness of personal relations with supervisor
_____	S9	Teamwork
_____	S10	Ability to socialize with co-workers
_____	S11	Social communication skills
_____	F1	Task orientation
_____	F2	Social skills
_____	F3	Work motivation
_____	F4	Work conformance
_____	F5	Personal presentation

Critical employability deficits, i.e., behaviors rated "1" or "2"

"1" Problem areas	"2" Problem areas

[1] Arkansas Research and Training Center in Vocational Rehabilitation, University of Arkansas, Fayetteville

REFERENCES

ADA's passage brings little improvement in employment (1993). *Report on Disability Programs, 16*(18) (Silver Spring, MD: Business Publishers).

Ashley, W., Cellini, J., Faddis, C., Pearsol, J., Wiant, A., & Wright, B. (1980). *Adaptation to work: An explanation of processes and outcomes.* Columbus, OH: Ohio State University, National Center for Research in Vocational Education.

Barton, E. (1967). *Training materials on work evaluation*, Unpublished paper.

Craven, L. (1979). Job skills are not enough. *Industrial Education, 2*, 32-33.

Crites, J. (1976). A comprehensive model of career development in early adulthood. *Journal of Vocational Behavior, 9*, 105-118.

Crites, J. (1982). Measurement of career development. In B. Bolton & R. Roessler (Eds.), *Symposium on applied research methodology* (pp. 1-8). Fayetteville, AR: University of Arkansas, Rehabilitation Research and Training Center.

Farley, R., & Hinman, S. (1986). Enhancing job interview and job retention behavior with relationship skills training. *Vocational Evaluation and Work Adjustment Bulletin, 19*(2), 55-60.

Foss, G., & Peterson, S. (1981). Social-interpersonal skills relevant to job tenure for mentally retarded adults. *Mental Retardation, 19*, 103-106.

Gellman, W. (1968). The principles of vocational evaluation. *Rehabilitation Literature, 29*, 98-102.

Grant, D. J., Marron, M. J., & Welsh, W. A. (1981). *Beginning a longitudinal analysis: A look at patterns of labor force mobility among deaf graduates of the Rochester Institute of Technology* (Technical Report No. 37). Rochester, NY: National Technical Institute of the Deaf, Institutional Planning & Research.

Haccoun, R.R., & Campbell, R.E. (1976). *Work entry problems of youth: A literature review.* Columbus, OH: Ohio State University, Center for Vocational and Technical Education.

Herr, E. (1984). Links among training, employability, and employment. In N.C. Gysbers & Associates, *Designing careers* (pp. 78-105). San Francisco: Josey-Bass.

Jepsen, D. (1984). The developmental perspective on vocational behavior: A review of theory and research. In S. Brown & R. Lent (Eds.), *Handbook of counseling psychology* (pp. 178-215). New York: John Wiley.

Greenwood, R., & Johnson, V.A. (1985). *Employer concerns regarding workers with disabilities.* Fayetteville: University of Arkansas, Research and Training Center in Vocational Rehabilitation.

Johnson, V. A. (1989). Employer identified initiatives to enhance the employment of persons who are deaf. *Proceedings of the Southeast Regional Institute on Deafness.* Knoxville, TN: University of Tennessee.

Johnson, V. A. (1992). Job mobility: Strategies for acquiring promotability potential. *Proceedings of the Self Help for the Hard of Hearing Conference.* Bethesda, MD: Self Help for the Hard of Hearing, Inc.

Mathews, R., Whang, P., Fawcett, S. (1980). Development and validation of an Occupational Skills Assessment Instrument. *Behavioral Assessment, 2,* 71-85.

McClelland, D. (1961). *The achieving society.* Princeton, NJ: Van Nostrand.

Neff, W. (1986). *Work and human behavior.* (3rd ed.). New York: Aldine.

Oetting, G., & Miller, C. (1977). Work and the disadvantaged: Work adjustment hierarchy. *Personnel & Guidance Journal, 56,* 29-35.

Roessler, R., & Bolton, B. (1983). Assessment and enhancement of functional vocational capabilities: A five year research strategy. *Vocational Evaluation and Work Adjustment Association, Richard J. Baker Memorial Monograph, 1* (1).

Roessler, R., & Bolton, B. (1985). *The work personality profile: A rating instrument for assessing job maintenance skills.* Fayetteville, AR: University of Arkansas Research and Training Center in Vocational Rehabilitation.

Roessler, R.T., & Johnson, V.A. (1987). Developing job maintenance skills in learning disabled youth. *Journal of Learning Disabilities, 20*(7), 428-432.

Schroedel, J.G. (1976/1977). Variables related to the attainment of occupational status among deaf adults (Doctoral dissertation, New York University, 1976). *Dissertation Abstracts International, 38* (2). University Microfilms No. 77-16, 447.

Schroedel, J.G., & Jacobsen, R. J. (1978). *Employer attitudes towards hiring persons with disabilities: A labor market research model.* Albertson, NY: Human Resources Center.

Selz, N., Jones, J., & Ashley, W. (1980). *Functional capacities for adapting to the world of work.* Columbus, OH: Ohio State University, National Center for Research in Vocational Education.

Srebalus, D., Marinelli, R., & Messing, J. (1982). *Career development: Concepts and procedures.* Monterrey, CA: Brooks/Cole.

Underwood, B. (1966). *Experimental psychology* (2nd ed.). New York: Appleton-Century-Crofts.

Welsh, W. A. (1987). *Career mobility: A review of selected literature.* Rochester, NY: National Technical Institute for the Deaf, Office of Postsecondary Career Studies and Institutional Research.

Wilms, W. (1984). Vocational education and job success: The employer's view. *Phi Delta Kappa,* 65(5), 347-350.*

Resource Personnel

Virginia Anne Johnson, Ed.D., CRC
Research Assistant Professor

Sandy Parkerson, B.S.
Program Specialist